The Researchers Report 2012

Country Profile: Lithuania

Deloitte.

TABLE OF CONTENTS

1. Key data

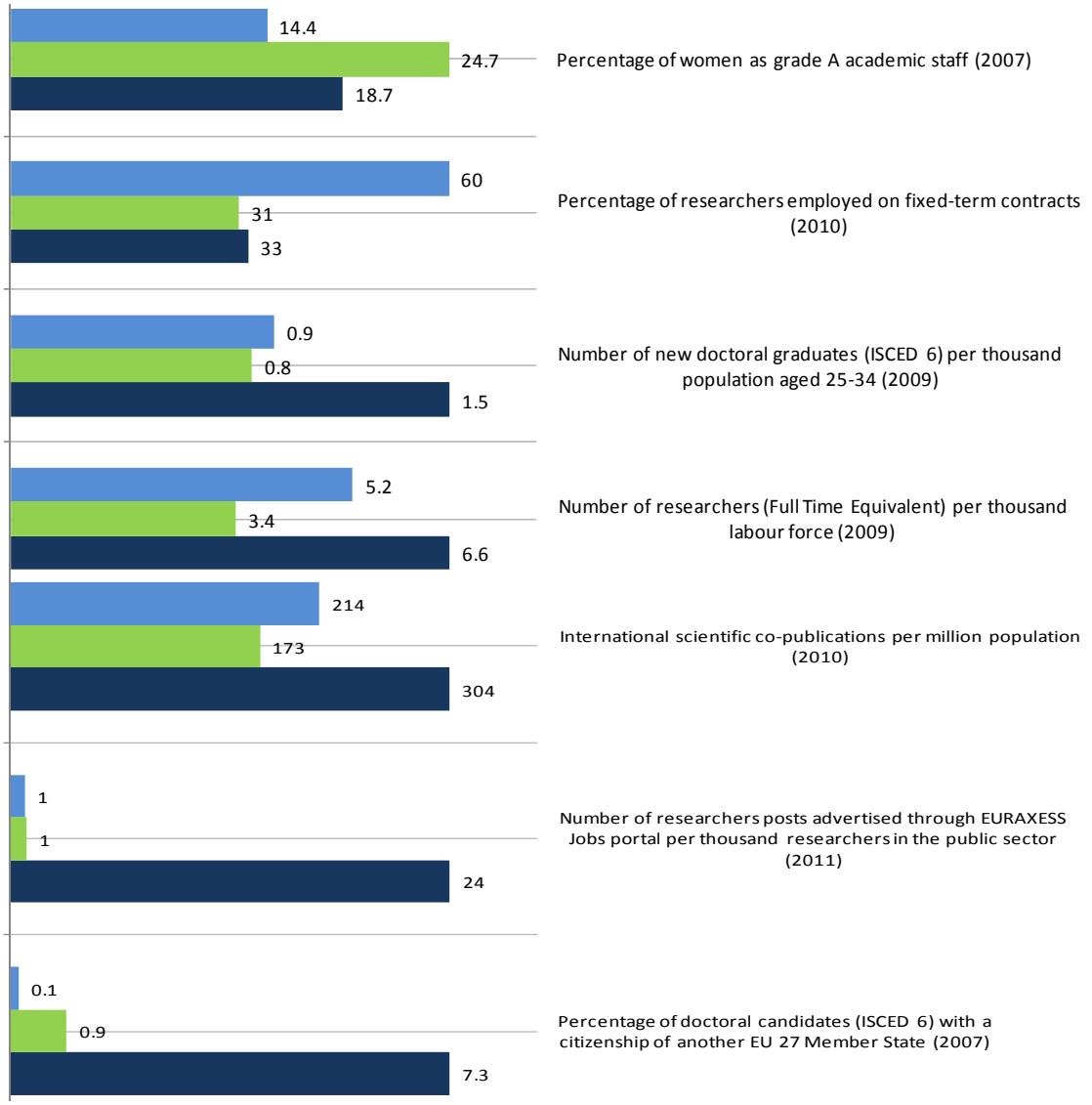
National R&D intensity target

"In the last decade, R&D intensity in Lithuania increased from 0.59 % of GDP in 2000 to 0.84 % in 2009, i.e. an annual average growth rate of 3.9 %. It is to be noted that the increase in R&D intensity in 2009 compared to 2008 (0.80 % of GDP) is due to a more severe drop in GDP than in nominal R&D expenditure. Lithuania's R&D intensity is still among the lowest in the European Union. In order to maintain and increase its economic competitiveness and secure high-quality jobs, Lithuania will have to sharply increase its investments in research and innovation. Lithuanian authorities have recognised this and have set a very ambitious national R&D target for 2020: R&D intensity in Lithuania should account for 1.9 % of the national GDP in 2020. This net increase of around 1.1 % would be similar to the one needed for the EU to reach the 3 % R&D target."[1]

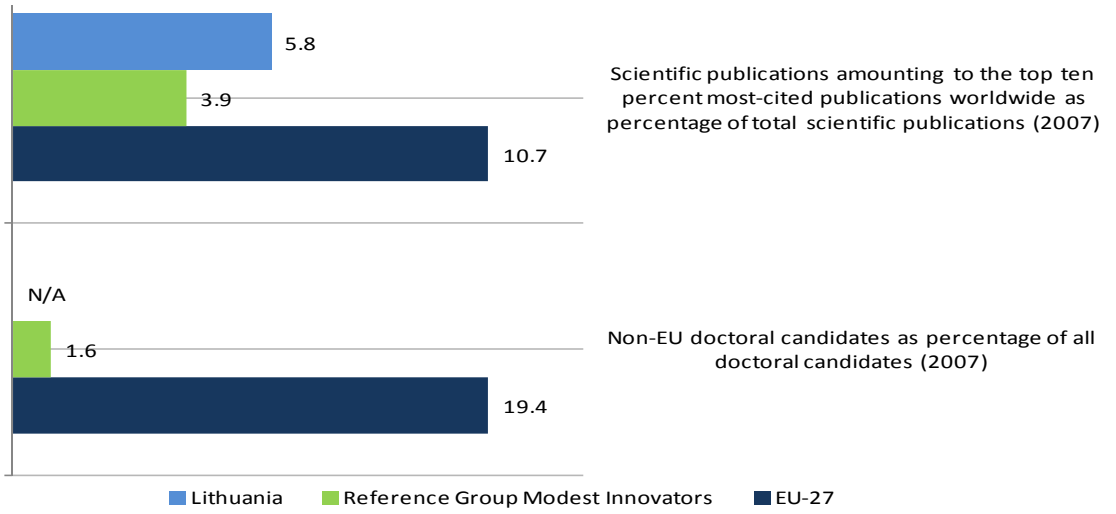
Key indicators measuring the country's research performance

The figure below presents key indicators measuring Lithuania's research performance against a reference group and the EU27 average[2].

Figure 1: Key indicators – Lithuania



[1] European Commission (2011), "Innovation Union Competitiveness Report 2011".
[2] The values refer to 2011 or the latest year available.



Source: Deloitte
Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, Science Metrix/Scopus (Elsevier), Innovation Union Scoreboard 2010
Notes: Based on their average innovation performance across 24 indicators Bulgaria, Latvia, Lithuania and Romania show a performance well below that of the E-27. These countries are the Modest innovators[3].

Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

Indicator	Lithuania	EU Average
Head Count per 1 000 active labour force population (2008)	8.38	9.45
Head Count (2008)	13 518	-
FTE per 1 000 active labour force population (2009)	5.17	6.63
Full time equivalent (FTE) (2009)	8 490	-

Source: Deloitte
Data: Eurostat

2. National strategies

The Lithuanian Government has put in place a set of measures aimed at training researchers to meet its R&D targets and at promoting attractive employment conditions in public research institutions. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach Lithuania's R&D targets, to promote attractive working conditions, and to address gender and dual career issues.

Table 2: National strategies

Measure	Description
Law on Higher Education and Research (2009)	Adopted in April 2009, the Law on Higher Education and Research marked the start of a systematic restructuring of Lithuania's higher education and scientific research system. Against the backdrop of global competition and national modernisation objectives, the Lithuanian Government initiated a systemic reform based on the following principles: - Encourage competition as the main driving force for achieving progress in the higher education sector; - A new financing method primarily targeting top-performing students (and not the Higher Education Institutions); - Strengthening colleges and revamping the student system in general; - Enhancing Universities' autonomy; and - Encouraging a competitive research system.
Lithuanian Innovation Strategy for the Years	The Lithuanian Innovation Strategy for the Years 2010-2020 offers a vision, sets objectives and defines concrete results to be achieved in the field of Lithuanian innovation up to the

[3] European Commission (2011), "Innovation Union Scoreboard 2010".

Measure	Description
2010-2020 (2010)	year 2020. The Strategy aims at mobilising and managing State resources more efficiently so as to create a competitive knowledge economy. The strategy calls for, amongst others: - Building a creative society and creating conditions for the development of entrepreneurship and innovation; - Strengthening the knowledge base by developing integrated science, studies and business centres at international scale; - Creating an education and higher education system which promotes creativity and innovation; - Developing effective mechanisms of business and science cooperation and promoting schemes for supporting joint business and science projects; Strengthening interaction among science, studies and business.

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2007, the percentage of women grade A academic staff was 14.4% in Lithuania compared with 24.7% among the Innovation Union reference group and an EU average of 18.7%.

In June 2008, the Ministry of Education and Science adopted a Strategy for the Implementation of Equal Opportunities for Men and Women in R&D. The main purpose of the Strategy is to increase the number of female researchers in physics, technology and in high-level positions. Gender mainstreaming tools and a monitoring system are being developed in the period 2008-13. In addition, the Strategy calls for a review and possible amendments to the law with the aim of introducing additional finance tools for female scientists. Moreover, recommendations are to be drawn up with the aim of implementing gender mainstreaming tools in research and in higher education institutions.

In line with this Strategy, the Lithuanian Academy of Sciences in January 2011 started a two-year project entitled Equal Opportunities in Research (LYMOS). The project aims to:

- Analyse the general aspects of legal Acts in the field of R&D field and draw up recommendations for improvement;
- Develop a set of gender mainstreaming tools and issue recommendations to institutions which could be used in the management of human resources;
- Create a monitoring and evaluation system dedicated to gender issues in Lithuanian R&D and introduce it into the existing system;
- Create and test financial support measurers for young female researchers in support of their return to work after maternity leave; support female researchers with access to grants, participation in conferences, summer schools, and short-term visits abroad.

Each year, the Minister of Science and Education officially approves the number of doctoral graduates, based on a distribution by field of science. In 2009-11, the number of female students grew in all fields of science (Humanities, Social Sciences, Physical Sciences, Biomedical Sciences and Engineering). Based on this positive development, the Lithuanian Government does not see a need for the introduction of any additional measures aimed at increasing the number of female students taking science to an advanced level.

Maternity leave

Female researchers in Lithuania enjoy a number of rights enabling them to interrupt or to extend their contract in the framework of maternity leave. Researchers employed under an employment contract have the right to go on maternity leave for up to three years[4].

[4] If researcher is unemployed, he/she is eligible for social allowances and benefits available to officially unemployed persons.

4. Open, transparent and merit-based recruitment

Recruitment system

Job vacancies are published on dedicated websites (Lithuanian Research Council) and newspapers as well as on the EURAXESS Jobs portal. It is a statutory requirement to publish job vacancies online.

Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

Table 3: Open recruitment in higher education and public research institutions

Do institutions in the country currently have policies to …?	Yes/No	Description
– **publish job vacancies on relevant national online platforms**	Yes	It is a legal obligation.
– **publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS)**	Yes	Legal obligation for positions of Heads of public Research Institutes.
– **publish job vacancies in English**	Yes	Legal obligation for positions of Heads of public Research Institutes.
– **systematically establish selection panels**	Yes	It is a legal obligation.
– **establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.)**	Yes	A recruitment commission which evaluates candidates for the position of teaching staff members and research staff members shall be set up in accordance with the procedure laid down by higher education and research institutions. Not less than one-third of the members of the recruitment commission must be persons who do not work in this higher education and research institution. When making arrangements for a competition to fill the position of the chief research staff member or professor, at least one international expert must be in the recruitment commission.
– **publish the composition of a selection panel (obliging the recruiting institution)**	Yes	-
– **publish the selection criteria together with job advert**	Yes	-
– **regulate a minimum time period between vacancy publication and the deadline for applying**	Yes	It is a legal obligation – at least 3 months.
– **place the burden of proof on the employer to prove that the recruitment procedure was open and transparent**	Yes	-
– **offer applicants the right to receive adequate feedback**	Yes	-
– **offer applicants the right to appeal**	Yes	-

Source: Deloitte

EURAXESS Services Network

In 2011, the number of researcher posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 1 in Lithuania, the same as the innovation reference group and compared with an EU average of 24[5].

The EURAXESS Centre and the portal are fully operational and are managed by the Lithuanian Research Council. The platform provides administrative assistance and information on pensions, working conditions, tax, migration issues, etc. In 2011, 122 publicly-funded job vacancies were recorded on EURAXESS.

[5] See Figure 1 "Key indicators – Lithuania".

5. Education and training

Measures to attract and train young people to become researchers

The table below summarises key measures aimed at training and at attracting young people to become interested in science and ultimately for them to pursue a research career.

Table 4: Human Resources - Key programmes and Initiatives

Measure	Description
National Higher Education Programme (2007-13)	The National Higher Education Programme (2007-13) supports the development of students' and professors' skills and competencies. Moreover, the Programme provides financial support for the development of Lithuania's research infrastructure with a dedicated budget of EUR 221.28 million.
Post-doc Internship implementation in Lithuania (2009-2015)	This competition-based Programme supports researchers' in taking-up a post-doc position. In addition, it encourages researchers to work in an institution other than their own. Researchers from abroad are also eligible to participate. The overall budget of the programme is EUR 10.3 million. 150 pos-doc grants have been already granted.
Researchers Career Programme (Structural Funds Programme for the years 2007-13) (2007-13)	The Research Career Programme (EUR 182.5 million for the period 2007-2013) contains a set of measures aimed at raising young people's interest in pursuing a research career by offering attractive working conditions and clear career prospects at all career stages. The implementation of the Researchers' Career Programme contains the following measures: - Provide support to scientists and researchers in their (scientific) activities (general grant); - Promotion of top-performing international researchers; - Promotion of scientists', researchers' and students' mobility and research activities; - Improvement of researchers' qualifications and competencies (science databases, e-documents); - Activities strengthening R&D thematic networks and associations; - Improvement of R&D quality and training of experts; - State aid for highly-skilled staff employed in companies; - Dissemination of knowledge of science and technology among students; and - Developing a (research) infrastructure designed for dissemination of knowledge about research, technologies and innovation.
Scholarship Support (ongoing)	Every student in Lithuania can apply for scholarship support on a competitive basis.
Students' Research Practice (ongoing)	The Lithuanian Research Council Programme encourages young people to gain practical (work) experience while working in a research institute. Designed for Bachelor and Master's students, the Programme aims to raise young people's' interest in pursuing a career in research. The Programme is competition-based and aims at attracting top-performing candidates.
Student Vouchers (ongoing)	State funding for Bachelor studies is provided in the form of student vouchers to the best entrants applying to universities and colleges[6]. Student vouchers are awarded to incoming students based on their secondary education graduation results. Each year, two voucher quotas are established - one for colleges and one for universities.

Source: Deloitte

Doctoral graduates by gender

In the last five years, the number of doctoral graduates has experienced steady growth in Lithuania. Figures have increased from 12 013 doctoral graduates in 2006 to 13 848 doctoral graduates in 2010. Generally, the ratio of female doctoral graduates is higher than that of men. The table below shows the number of doctoral graduates in Lithuania by gender as a ratio of the total cohort population.

Table 5: Doctoral graduates by gender

Indicator	Lithuania	EU average
Number of new doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (total) (2009)	0.9	1.5
Female Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2009)	1.1	1.4

[6] Colleges are professionally oriented higher education institutions.

Indicator	Lithuania	EU average
Male Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2009)	0.7	1.6

Source: Deloitte
Data: Eurostat

Funding of doctoral candidates

In Lithuania, State funding is available to full-time, part-time and extramural doctoral candidates based on their performance. Most of the doctoral candidates benefit from the state funding. In 2011, out of a total of 2 632 doctoral candidates in universities, 2 388 received scholarships.

Based on competition, universities and research institutes can apply for funding for doctoral candidates with the Lithuania Research Council where one third of funding is allocated on a competitive basis (two thirds is for core funding). The total amount of funding available amounted to EUR 29 million in 2009 and EUR 43 million in 2010.

Measures to increase the number of students taking science to an advanced level

The number of doctorates awarded (HEI and Research Institutes) in the fields of Humanities, Social Sciences, Physical Sciences, Biomedical Sciences and Engineering increased from 397 in 2009 to 406 in 2010. Based on a relatively high number of doctoral graduates, the Lithuanian Government has not introduced any measures aimed at increasing the number of doctorates graduated in science, technology, engineering and mathematics (STEM) specifically.

Measures to increase the quality of doctoral training

The Regulation on Doctoral Training (2009) paved the way for a new approach to PhD training in Lithuania. The right to provide doctoral training is granted by the Minister of Education and Science. Universities and research institutes enjoy a joint right to train PhDs. Coordination between universities and research institutes increases the quality of doctoral training, and fosters openness and transparency in the research system. The Lithuanian Research Council supervises doctoral training and evaluates research activities. As a general rule, researchers are encouraged to spend time abroad during their PhD.

Skills agenda for researchers

The Lithuanian Government has not introduced any horizontal measures in support of a 'Skills Agenda'. However, existing and planned programmes/initiatives (Structural Funds programmes) provide specific training activities aimed at improving researchers' skills, e.g. in communication, IPR, career management and entrepreneurship training (for more information on programmes/initiatives in support of lifelong learning for researchers, see chapter 2 "National strategies" and chapter 7 "Collaboration between academia and industry").

6. Working conditions

Remuneration

In 2009, a Government Decree was introduced to reduce differences between researchers' salaries. Universities are autonomous to stipulate salaries for their academic and scientific staff. In addition, the Lithuanian Government has put in place a Programme[7] aimed at increasing researchers' salaries. However, the Programme was put on hold as a result of austerity measures introduced by Government during the financial and economic crisis. Currently, the State budget does not allow for an increase of researchers' salaries.

Competitive funding schemes offer top-performing researchers the possibility of improving their salaries. On average, researchers' salaries have increased in the last years. Minimum salaries (as for other professions) are regulated by law in Lithuania.

Researchers' Statute

Lithuanian law does not provide for an official researchers' 'statute'. However, certain rights and obligations are defined by university statutes, rules and regulations of research institutes, and by the Law on Research and Higher Education (2009) which can be considered the main legal Act granting certain rights to researchers.

[7] 'Increase of Wages in Higher Education and Research Institutions' (2009-2011).

'European Charter for Researchers' & 'Code of Conduct for the Recruitment of Researchers'

The implementation of the 'European Charter for Researchers' as well as the 'Code of Conduct for the Recruitment of Researchers' is not actively promoted as a government programme. However, both the Rectors' Conference and the Conference of Rectors of research institutions have signed the Charter.

Autonomy of institutions

Following a reform of State Universities, professional boards composed of university and public representatives are free to consider and approve strategic decisions and to appoint directors. Moreover, all State Universities and colleges are granted freedom in decision-making, the right to own property and to manage property entrusted to them by the State.

Career development

The Researchers Career Programme aims to raise young people's interest in pursuing a researcher career by offering attractive working conditions and clear career prospects. Among others, the Programme supports scientists and researchers in their (scientific) activities. Moreover, it promotes the mobility of top-performing international researchers. For more information on the Researchers Career Programme, see chapter 2 "National strategies".

Shift from core to project-based funding

The shift from core to project-based funding has had a positive impact on researchers' working conditions. In 2010, the ratio of core to project-based funding was 50:50. The competitive system has led to an improvement in researchers' (scientific) performance. Moreover, the shift has enabled investment in an improved research infrastructure.

Social security benefits (sickness, unemployment, old-age)

Publicly-funded fellowships provide health insurance while pension contributions are not covered. All PhD students working under employment contracts[8] enjoy social security benefits. The Law on Pensions for Researchers provides a pension scheme for researchers who have been employed in the researcher profession for at least ten years.

7. Collaboration between academia and industry

The Ministry of Education and Science has signed 15 agreements with Lithuanian partners (associations, companies, various institutions and higher education institutions) in support of the provision of incentives for students to gain (work) experience in an enterprise. In the framework of the Programme (budget EUR 5.8 million), student internship models are developed in companies and institutions. Conditions are set for students to be able to carry out an internship in various economic sectors.

In order to encourage companies to employ (more) scientists, in 2010, the Ministry of Higher Education and Science allocated EUR 17.4 million in support of 'State aid for highly qualified persons' employment in enterprises' for period 2010-2013. Funds are allocated for no more than three years to one company and per employed person. The financial support covers salaries, participants' travel expenses, and participation in events. However, there was no sufficient interest from enterprises till the end of 2011. Currently, the Ministry of Education and Science has made available EUR 939 348 for projects, which are being implemented in 2012. The activity is managed by the European Social Fund Agency.

The Ministry of Education and Science adopted the 'High technology development programme' for the year 2011-2013 (EUR 2.6 million). The programme aims to boost the development of hi-tech trends with scientific potential, which enable the creation of new competitive products. The Ministry of Economy adopted the 'Industrial biotechnology development programme for Lithuania' for the period 2011-2013 (EUR 14.5 million). The programme aims to accelerate the development of the biotechnology industry in Lithuania. Both programmes are implemented by the Agency for Science, Innovation and Technology (MITA).

The Ministry of Education and Science has granted EUR 135 510 in support of Industrial Property Rights (IPR) protection. Implemented by the Agency for Science, Innovation and Technology (MITA), the measure aims to

[8] Approximately 80-90% of PhDs have employment contracts.

encourage universities, research institutes and companies to protect their intellectual property. In addition, it encourages stakeholders to cooperate more closely in the development of innovative and competitive products.

8. Mobility and international attractiveness

In 2007, the percentage of doctoral candidates (ISCED 6) who were citizens of another EU-27 Member State was 0.1% in Lithuania compared with 0.9% among the innovation reference group and an EU average of 7.3%[9].

Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

The table below summarises key measures aimed at attracting and retaining leading national, EU and third-country researchers.

Table 6: Measures to attract and retain 'leading' national, EU and third country researchers

Measure	Objective
Brain Retain and Gain Strategy (2008-2013))	The objective of the Brain Retain Strategy is to attract national and third-country researchers to carry out their work in Lithuania. The strategy also aims at promoting communication and information exchange. It offers rewards to renowned researchers with Lithuanian roots.
Global Grants Scheme (2009-2015)	Supported by the Lithuanian Research Council, the Programme aims at attracting national and third-country researchers to Lithuania. Approximately EUR 0.5 million per project have been made available for the duration of three years. The total budget of the programme is around EUR 34.3 million.
Short Period Visits Programme (2009-2013)	As part of the Short Visits Programme, institutions can invite third-county researchers to Lithuania and send national researchers abroad. The total budget is around EUR 1 million.

Source: Deloitte

Inward mobility (funding)

Funding in general is open to all researchers, including third-country nationals. Applications for funding schemes must be submitted in Lithuanian, posing a language and administrative barrier for third-country nationals applying for funding schemes.

Outbound mobility

As a general rule, researcher mobility is supported in Lithuania. The table below summarises key programmes/initiatives in support of researchers' outbound mobility.

Table 7: Measures to encourage outbound mobility

Measure	Description
Post-doc traineeship implementation in Lithuania (2009-2015)	This competition-based Programme facilitates researchers in taking-up a post-doc position. In addition, it encourages researchers to work in an institution other than their own. Researchers' international mobility is also supported by this programme.
Sciex Programme (2009-2016)	Sciex is a promotion tool for research teams from all disciplines, consisting of team members from the new Member States and Switzerland. Sciex fellows of any age from new Member States pursue their research in cooperation with Swiss researchers in Swiss research institutions. Ideal working and framework conditions support the success of their research.

Source: Deloitte

Portability of national grants

As a general rule, funding is not portable. The Lithuanian Government has not put in place any specific measures supporting the portability of grants.

Access to cross-border grants

As a general rule, competition-based national research grants and research fellowships which are provided by the Lithuanian Research Council are open to non-residents from the EU and third countries.

[9] See Figure 1 "Key indicators – Lithuania"

Measures encouraging inter-sectoral mobility

For more information on measures supporting inter-sectoral mobility, please see chapter 7 “Collaboration between academia and industry”.